rightfully wary of alcohol. The adverse effects of starting or increasing alcohol consumption outweigh any theoretical benefits.

Doctors should nevertheless welcome questions from patients about alcohol use. These inquiries provide an opportunity to screen for at-risk or dependent drinking, and to counsel drinkers about recommended drinking limits. The Alcohol Use Disorders Identification Test (AUDIT) or TWEAK questionnaire identifies both at-risk drinking and alcohol abuse and dependence in diverse populations,[4,5] and can be used in standardised office questionnaires. A single AUDIT question, "How often in the past year did you have six or more drinks on an occasion?" is convenient for verbal screening, and was more effective than the CAGE questions in men.[6] A sex-specific variation (more than four drinks for women and more than five for men) may be more appropriate.[6] For these questions, a "drink" should be defined as 12 fl oz (about 340 mL) of beer, 5 fl oz of wine (about 140 mL), and 1·5 fl oz of spirits (about 40 mL).

Patients who are positive on a screening test should be assessed further. This investigation should include assessment of the quantity, frequency, and pattern of drinking;personal beverage preferences; perceived benefits of alcohol use; and specific problems that the patient may be having because of drinking, especially symptoms of dependence. To assess dependence, patients should be explicitly asked about: tolerance (Do you find you can hold more alcohol than you used to?); loss of control (How often during the past year have you found you were not able to stop drinking once you had started?); neglect of responsibilities (How often in the past year have you failed to do what was normally expected from you because of drinking?); and withdrawal (How often in the past year have you needed a first drink in the morning to get yourself going after a heavy drinking session?).[5]

Patients with any symptoms of dependence should be encouraged to seek specialist treatment. Even when patients with at-risk drinking or alcohol dependence show no motivation to change their drinking habits, a dialogue can be started that builds trust and rapport by exploring the costs and benefits of drinking for that individual.[7] Personalised feedback regarding specific adverse effects of drinking that the patient has experienced, followed by explicit advice on recommended drinking limits, can be very effective in office-based settings.[8]

Physicians must use every opportunity to educate and advise their patients about the risks of alcohol use and abuse. Perhaps the new wine labels will encourage these alcohol-related discussions.[9]

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Exposure assessment in community-based epidemiological studies

Study of the health effects of the occupational environment on a general population has traditionally been very difficult because not all the employers of the study participants can be reached, and the participants do not generally know the agents to which they have been exposed or the level of exposure. Instead, a checklist of exposures or general questions about the job (title, type of industry, dates) has usually been administered. Problems with these approaches have been described.[1]

To overcome these problems, detailed job-specific questionnaires are increasingly being used. They ensure that detailed, relevant, and consistent information is collected from each participant. Intuitively, this approach should enable more accurate assessments than would more traditional approaches. No information has been available, however, on how well people can accurately report historical information, on whether the information reported can be translated into accurate assessments, and on how various data-collection or assessment methods compare.

A paper by Erik Tielemans and colleagues provides useful information on the latter two questions.[2] The investigators have shown that it is very difficult to develop accurate assessments from any type of questionnaire data. Like others,[3] they have found that the measures of agreement reported are generally poor to moderate.The effect of misclassification on odds ratios, as exemplified by calculations based on Tielemans and colleagues' data on aromatic solvents, can be drastic (table), so substantial improvement in assessment of exposures is necessary.

Despite the extent of misclassification with job-specific questionnaires, assessments based on these questionnaires agreed better with biological markers than did the more traditional approaches. This finding, however, poses problems for the epidemiologist. Data collection and exposure assessment with job-specific questionnaires are more expensive and require more interview time than use of a checklist, generic work-history questions, or job-exposure matrices. Is the difference in accuracy worth the difference in time and money? If the hypothesis of interest is primarily occupational, it probably is; if the hypothesis is not primarily occupational, it may not be. It would, however, be useful to develop shorter versions of the detailed questionnaires to see at what point their accuracy falls off to the level of misclassification occurring with checklists, generic work histories, or job-exposure matrices.

Although there are advantages to the job-specific questionnaire, more improvement is obviously needed. Several issues should be considered. First, a substantial amount of assessment time is required when either work

Effect of misclassification on odds ratios*

	Hypothetical odds ratios		
	5·9	3·1	1·8
Method			
JSQ_{strict}	2·2	1·7	1·3
$JSQ_{lenient}$	1·8	1·5	1·2
GQ_{strict}	1·7	1·5	1·2
$GQ_{lenient}$	1·6	1·4	1·2
$JEM_{external}$	1·3	1·2	0·5
$JEM_{population}$	1·5	1·3	1·2
Checklist	1·3	1·2	1·1
$JEM_{external}$/Checklist	1·5	1·4	1·2
$JEM_{population}$/Checklist	1·6	1·4	1·2

*Data are observed odds ratios.
JSQ_{strict}=highly exposed subjects according to job-specific questionnaire;
$JSQ_{lenient}$=highly or moderately exposed subjects according to job-specific questionnaire;
GQ_{strict}=highly exposed subjects according to generic questionnaire;
$GQ_{lenient}$=highly or moderately exposed subjects according to generic questionnaire;
$JEM_{external}$=exposure classification according to external job-exposure matrix;
$JEM_{population}$=exposure classification according to population-specific job-exposure matrix.

histories or detailed questionnaires are administered. To decrease this time, a sensitive job-exposure matrix could be used to identify possibly exposed individuals, so that individual assessments are done only for those jobs identified as being associated with possible exposure. This approach would eliminate the need to review a substantial number of jobs for most agents.

Another way of reducing assessment time is to improve documentation of the assessments. Good assessments require substantial background research and hence much time. Few investigators have described in detail how they made their assessments, so although investigators commonly assess the same agents, each investigator has to duplicate the background research. Apart from reducing the time that other occupational hygienists need to give to background research, publication of the database developed for a study would also enable others to identify errors that can then be corrected in that or in future studies, and enable others to compare results across studies.

A third way of improving assessments is to exploit published information on exposure determinants and exposure models. Determinants and models could be used to develop appropriate questions such that responses would be easily translatable into exposure levels. Furthermore, the responses could be computerised. When determinant information or exposure models exist for a particular job, the estimation process could be automated, at least for some jobs (eg, painting and dry cleaning). It would also make estimation of exposure for many other jobs easier, because the characteristics of a job could be compared with those of a job with determinant information. For example, there is much published information on pesticide application on crops, but little on pesticide application on golf courses. Use of exposure determinants and data on farmers to estimate exposures from application of pesticides to golf courses would speed up the assessment and is more likely to be more accurate than estimates based on professional judgment alone.

The study by Tielemans and colleagues also indicates that very careful consideration needs to be given to the weight assigned to exposure categories.[1] Epidemiologists generally categorise exposure levels as low, medium, or high. When an individual has held two or more jobs with differing levels of exposure, estimation of cumulative exposure requires that some sort of weighting be put on these levels. An earlier study suggested that the traditional weighting of 1, 2, and 3, for low, medium, and high exposure, respectively, may be inappropriate.[4] Tielemans and colleagues' study provides further evidence for this view. The median airborne concentration of aromatic solvents in the high-exposure category was 20 times higher than that for the moderate-exposure category, which was three times higher than that for the category of low or no exposure. Other ratios were observed for the solvent metabolites and for concentrations of airborne chromium and its metabolites. Different ratios between exposure categories are therefore likely to exist by agent and by study population. What weighting was used and how it was derived should be provided in the epidemiological methods section of a study.

Tielemans and colleagues' labour-intensive methodological study thus provides reassuring news that the job-specific questionnaires are a better data-collection and assessment approach than the more traditional methods. It also points out the need for better understanding of when assessments produce valid results and when they fail. Others have found a high degree of validity for assessment of jobs unassociated with exposure, but validity falls when level and frequency of exposure are evaluated for jobs with exposure.[3] More work is needed to identify the circumstances when misclassification occurs and how it can be reduced.

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Towards a coherent public-health analysis for epilepsy

When the slogan "Health for all at 2000" was adopted at Alma Ata, closure of the gap between rich and poor countries seemed possible. Now, on the eve of the new millennium, reality could not be further from this goal. With mounting debt, civil wars, and rapid urbanisation, poverty has increased. Progress has stalled on health and social targets in many countries that have stopped "developing".[1] An increasingly ageing population and the decline of infectious diseases will shift morbidity patterns towards non-communicable disorders, with neuro-psychiatric disorders making up more than a quarter of the global burden of disease.[2]

Epilepsy is a chronic disorder that represents a collection of syndromes of differing prognosis, occurring mostly in childhood and old age. Most of the syndromes are of